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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,424	01/12/2001	Manabu Sawasaki	1508.65123	2317

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GREER, BURNS & CRAIN
300 S WACKER DR
25TH FLOOR
CHICAGO, IL 60606

EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/759,424

Applicant(s)

SAWASAKI ET AL.

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,8,13-16,22-24,32-41,47 and 48 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☒ Claim(s) 32 and 33 is/are allowed.

- 6) ☒ Claim(s) 1,8,13-16,22-24,34-41,47 and 48 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.

- 10) ☒ The drawing(s) filed on 12 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)

- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.

- 5) ☐ Notice of Informal Patent Application (PTO-152)

- 6) ☐ Other:

DETAILED ACTION

1. Applicant's election without traverse of Group I in Paper No. 3 (dated 02/19/2003) is acknowledged.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 8 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Lien et al., US Patent No. 6,493,050.

The above claims are anticipated by Lien et al. figures 1 and 16 which disclose a liquid crystal display (LCD) device comprising:

- . a pair of substrates (102, 104);
- . a liquid crystal layer (101);

- . a color filter (106);
- . a common electrode (122);
- . cell gap adjusting spacers (post spacer 108) formed on one of the pair of substrates (102);
- . domain defining projections (114) with same material (col. 5, last paragraph) and having a height lower than the spacers as claimed (figure 16).

5. Claims 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Noguchi, US Patent No. 5,040,875.

The above claims are anticipated by Noguchi's figure 6 which discloses an LCD device comprising:

- . a color substrate (320);
- . a liquid crystal layer (between two substrate 301 and 320);
- . a color filter (red 321, green 322, blue 323);
- . a black matrix formed by laminating more than two color filters and arranged in regions between pixel electrodes (portion over TFT 304);

6. Claims 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishimoto et al., US Patent No. 6,281,960.

The above claims are anticipated by Kishimoto et al. figure 1 which discloses an LCD device comprising:

- . a pair of substrates (2, 32);
- . a liquid crystal layer (50);
- . first spacers (48) for deciding a cell gap;

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. second spacers (10) having a height lower than the first spacers as claimed.

wherein the first spacers laminating a plurality of films (BM, B, G, R) inherently having a different compressive displacement (i.e., different elasticity) as well as different from the second spacers compressive displacement.

7. Claims 34-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim, US Patent No. 6,043,511.

The above claims are anticipated by Kim's figure 10 which discloses a thin film transistor (TFT) substrate comprising:

- . a transparent substrate (100);
- . a thin film transistor;
- . an insulating final protection film (passivation 61), wherein the insulating can be formed of insulating inorganic material (e.g., SiNx) or insulating organic material (e.g., opaque material);
- . a pixel electrode (70) as claimed, wherein the final insulating protection film is not interposed between the pixel electrode and the substrate in the pixel regions (i.e., thickness of the final insulating protecting film in the color regions is zero and different from no color region).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kishimoto et al., US Patent No. 6,281,960, in view of Miyazaki et al., US Patent No. 5,815,232.

Regarding the above claims, Kishimoto et al. discloses the claimed invention as described above except for columns formed of a plurality of color filters that are laminated in the liquid crystal injection port. Miyazaki et al. do disclose columns (island shape spacers) are positioned at the liquid crystal injection area (see abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a column at a liquid crystal injection area as shown by Miyazaki et al. in order to keep an uniform gap at the liquid crystal injection area (see abstract).

Allowable Subject Matter

10. Claims 32-33 are allowable over the prior art.

11. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art of record discloses or suggests an LCD device having a plurality of spacers interposed between two substrates, wherein the spacers are formed to satisfy all condition as set forth in claims 32-33.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 703-305-0423. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7726 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DN
05/02/2003



Dung Nguyen
Patent Examiner
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